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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,384	04/20/2001	Guy-Ho Cha	6192.0215.AA	9243

7590 12/23/2003

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EXAMINER

QI, ZHI QIANG

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,384

Applicant(s)

CHA ET AL.

Examiner

Mike Qi

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-25 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Sep.22, 2003 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and expressly the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,292,239 (Nagamura et al) in view of JP 11-133401 (Susumu et al) and US 5,815,227 (Lee).

Claim 1, Nagamura discloses (col.7, line 11 – col.8, line 67; Fig.1-13) that a liquid crystal display comprising:

- liquid crystal display panel (2), i.e., a display unit for displaying image;
- back light unit (BU) including a light source (4) for generating a light, a light guide (the photo conductive plate 8) installed at a side of the light source (4) so as to uniformly radiate the light generated from the light source (4) into the

- display unit and a light focusing means (lens sheets 5, 6 and diffusion plate 7) installed above the light guide (8) so as to focus the light transferred through the light guiding plate (8) to a surface of the display panel (2);
- resin frame (3) (a mold frame) having a first frame (a liquid crystal panel containing frame 17) and a second frame (a back light component containing frame 10).

Nagamura does not expressly disclose the mold frame having a first frame for receiving the display unit, the light guide plate and the light focusing means, and a second frame for receiving the light source, and the second frame has a groove formed on a side facing the light guiding plate for receiving the light source.

However, Susumu discloses (Figs.1-6) that a liquid crystal display device using two frames, one frame (first frame, such as supporting frame 24) is used for holding optical sheets such as the display panel (10), the light guiding plate (26) and the light focusing means (the optical films 28,30), another frame (lamp frame, such as holder 44 with cover 46) is used for receiving the light source (31). Although the holder (44) has a protective cover (46), but the holder (44) and the protective cover (46) also can be constituted as a frame and the function is for receiving and protecting the light source. Therefore, the light source (31) would be easily detachable and be easily substituted.

Susumu does not expressly disclose that the second frame (light source frame) has a groove formed on a side facing the light guiding plate.

However, Lee discloses (col.2, line 60 – col.4, line 12; Fig.4) that a lamp cover (125) functions as a light source frame and the open side of the lamp cover (125) (i.e., a

groove formed on the open side) is coupled with the light-inducing plate (105) (i.e., facing the light guide plate).

Since such detachable light source frame would be easily substituted and the lamp exchange also is easy.

Therefore, it would have been obvious to those skilled in the art at the time the invention was made to use such two frames as claimed in claim 1 for achieving easily exchanging the light source.

Claim 2, Nagamura discloses (col.8, lines 42-47, Fig.1-2) that the light source (lamp 4) for radiating light is held by a holder holding portions (13a, 13b) to hold the rubber holders (15), i.e., the lamp supporting member to be inserted into both ends of the lamp so as to support the lamp, and the lamp must have electrical cable to connect the lamp and the power control circuit, and that would have been at least obvious.

Claim 3, Nagamura discloses (Col.7, lines 14-24, Fig.1) that a reflection plate (9) installed below the light guiding plate (photoconductive plate 8) so as to reflect the light incident from the light guide plate (8) towards the display unit (display panel 2).

Allowable Subject Matter

3. Claims 4-25 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither discloses nor teaches a liquid crystal display device comprising various elements as claimed, more specifically, as the following:

the side walls of the first frame are vertically formed at side peripheral portions of the bottom surface except for one side peripheral portion of the bottom surface, and a supporting member of the first frame installed at the side peripheral portion of the bottom surface in which the side wall is not formed [claim 4];

the side walls of the first frame vertically formed at all side peripheral portions of the bottom surface except for one side peripheral portion of the bottom surface where the side wall is not formed, and the second frame being coupled with the first frame, such that the extremities of the second frame are within the periphery of the outer portions of the first frame [claim 10].

The closest reference Susumu discloses a structure of a liquid crystal comprising two frames, one frame for holding optical sheets such as LCD display panel, light guide plate and light focusing lens, another frame for holding the light source, so that the light source can be detachable. However, the structure is different from this application in which the light source holding frame (second frame) is coupled with the optical sheets holding frame (first frame) using one side of the first frame where no side wall in this side of the first frame.

Response to Arguments

5. Applicant's arguments filed on Sep.22, 2003 have been fully considered but they are not persuasive.

Applicant's **only** arguments are as follows:

1) None of the references discloses or suggest the claimed second frame that is

a mold frame and has a groove on a side facing the light guiding plate for receiving the light source.

Examiner's responses to Applicant's **only** arguments are as follows:

1) The reference Nagamura discloses (col.7, line 11 – col.8, line 67; Fig.1-13) that the resin frame (3) (a mold frame) having a first frame (a liquid crystal panel containing frame 17) and a second frame (a back light component containing frame 10). The reference Lee shows (col.2, line 60 – col.4, line 12; Fig.4) that a lamp cover (125) functions as a light source frame and the open side of the lamp cover (125) (i.e., a groove formed on the open side) is coupled with the light-inducing plate (105) (i.e., facing the light guide plate). The reference Susumu discloses (Figs.1-6) that a liquid crystal display device using two frames, one frame (first frame, such as supporting frame 24) is used for holding optical sheets such as the display panel (10), the light guiding plate (26) and the light focusing means (the optical films 28,30), another frame (lamp frame, such as holder 44 with cover 46) is used for receiving the light source (31). Although the holder (44) has a protective cover (46), but the holder (44) and the protective cover (46) also can be constituted as a frame and the function is for receiving and protecting the light source. Therefore, the light source (31) would be easily detachable and be easily substituted, and that is the advantage.

Conclusion

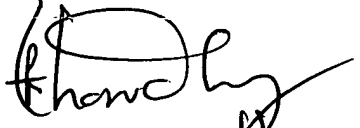
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2871

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Qi whose telephone number is (703) 308-6213.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mike Qi
December 10, 2003


T. Chowdhury
Primary Examiner